

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
2015 Gold King Mine Release SITREP**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 8**

**Subject:** Situation Report #13  
Gold King Mine Release  
San Juan County, CO  
Latitude: 37.8945 Longitude: -107.6384

**From:** Colorado Unified Command (Situation Unit)

**Date:** 08/21/2015  
**Reporting Period:** 08/20/2015  
**Website:** <http://www2.epa.gov/goldkingmine>

New information included in the SITREP is in **bold text**.

## **Executive Summary**

On August 5, while investigating the Gold King Mine in Colorado, the EPA cleanup team triggered a release of mine wastewater into Cement Creek which feeds into the Animas River. The release resulted in coloring the Animas River a mustard-orange as the pulse of the release moved downstream. The leading edge of the release passed through Durango, Colorado, on Friday, August 7, 2015, and on August 8, 2015, it crossed the border into New Mexico where it eventually discharged into the San Juan River. As the leading edge of the release moved further down the Animas River into the San Juan River it became indistinguishable.

A Unified Command (UC) located in Durango, Colorado was established and continues to assess and mitigate contamination resulting from the release. The UC includes EPA Region 8, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, and La Plata County. San Juan Basin Health Department has transitioned out of the UC and is now providing an Agency Administrator to the UC. Currently San Juan County and the Ute Mountain Ute Tribe are providing Administrators to the UC. The City of Durango and the Colorado Department of Public Health and the Environment (CDPHE) are providing Agency Representatives to the UC.

The EPA and CDPHE have been taking daily surface water samples from the Animas River and Cement Creek. Animas River sediment sampling has occurred. CDPHE has sampled raw and finished public drinking water supply systems. Upon request, the EPA has also been sampling private drinking water wells. The results of the sampling analysis are being distributed as appropriate. The EPA has also completed irrigation ditch assessment and ditches were flushed and monitored prior to opening for irrigation use.

The Animas River reopened to recreational use mid-day Friday August 14, 2015 after being closed to all watercraft since August 6, 2015. The City of Durango's drinking water intake was not in use at the time of the event and remained off line until Friday, August 14, 2015. Currently all irrigation ditches are open and available for irrigation use.

An EPA Area Command (AC) is also located in Durango, Colorado and coordinates EPA's response between the EPA Regions 6, 8, and 9.

La Plata and San Juan counties still have active disaster declarations and the public health advisory issued 8/14/2015 by CDPHE for the Animas River remains active.

A Joint Information Center (JIC) and an EPA AC public information officer (PIO) are co-located and coordinating support for the UC and the EPA AC respectively.

## **Introduction**

### **1.0 Background**

Site Number: A8K9RV	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category:
NPL Status: not listed	Operable Unit:
Mobilization Date: 08/05/2015	Start Date: 08/05/15
Demob Date: TBD	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification: 08/05/15

### **2.0 Site Description**

The Gold King Mine near Silverton, Colorado is a historic gold mine at approximately 11,300' elevation. The mine has a continuous discharge of acidic mine drainage that is a significant contributor of manganese, zinc, copper, and cadmium into the Cement Creek drainage of the Animas River watershed. The Gold King Mine has not had maintenance of the mine workings since 1991, and the workings have been inaccessible since 1995 when the mine portal collapsed.

### **3.0 Description of Threat**

Mine waste water was released into Cement Creek and the Animas River. The volume of the release based on US Geological Survey (USGS) Cement Creek gauging station was estimated at three million gallons. The initial environmental concern was the pulse of contaminated water containing sediment and metals discharged in Cement Creek which flows into the Animas River through Durango, Colorado, and into New Mexico where it joins the San Juan River before flowing into Utah.

### **4.0 Critical Resource Needs**

All resources are being tracked by the Resources Unit. Resources for the response continue to be ordered as needed to fill critical resource needs. There are several UC and IC positions that will be transitioning to new people over the next few days.

## 5.0 Strategic Considerations

United group of subject matter experts to advise policy makers.

## 6.0 Incident Objectives

1. Ensure health and safety of the public and response management personnel.
2. Identify criteria for lifting current health advisory.
3. Continue implementation of the private well sampling plan.
4. Finalize demobilization plan.
5. Facilitate transition to medium term sediment and river monitoring plan.
6. Continue coordination with State, Federal, Tribal and local Stakeholders and neighboring jurisdictions.
7. Continue management of adit discharge and discharge management plan.
8. Ensure continued access to mine site within constraints of on-going road work.
9. Continue mine dump stabilization.
10. Implement Emergency Alert plan and continue development of long term alert, monitoring and warning system.
11. Coordinate data sharing with local stakeholders.

## Current Activities

### 7.0 Property Assessments

The EPA is continuing property assessments, as needed, and identifying mitigation needs. There are currently 4-8 properties under consideration for targeted limited sediment removal.

#### 7.1 Surface and Private Well Water Sampling and Sediment Sampling

The EPA is regularly sampling seven surface water locations as follows:

Cement Creek – 1

Animas River upstream of confluence with Cement Creek – 1

Animas River downstream of confluence with Cement Creek – 1

Animas River through Durango – 4

The EPA samples collected on 8/20/2015 are provided in the following table:

Matrix	Number of Samples *	Total Samples Collected
Potable Water	17	296
Sediment	0	182
Surface Water	8	46

\*Quality Assurance samples are included in these numbers.

The EPA is conducting private well water sampling as needed and calling those residents sampled to provide the analytical results. It is unclear if the exceedances reported in the table below were caused by the mine release. Follow up work at the wells that exceed drinking water standards include: flushing

the well; resampling at the well; and taking an additional tap water sample for analysis.

The following table provides the private well information up to 8/19/2015.

Quantity	Daily	Totals
Private well samples requested*	0	323
Private wells sampled (does not include QA samples)	15	282
Private wells with primary drinking water exceedances	2	12
Remaining private wells to be sampled*		41

\*The well requests and remaining lists are constantly refined as both duplicate requesters and requestors determined to be on city water are removed from the list.

## 7.2 Call Center

Call center totals are provided in the following table:

Topic	8/20/2015	To Date Total
Well Water Test Scheduling	5	365
Water Concerns	2	108
Health Concerns	0	32
Recreation	0	21
Ecological Concerns	0	19
Livestock/Irrigation	0	19
Tourism/Media	4	63
Volunteer Offers	0	24
General Concerns	4	127
Daily Totals:	15	778

## 7.3 Water Distribution

**On 8/20/15 potable water deliveries were made to two locations for a total of 53,000 gallons.** 1120 cases of bottled water have been purchased to hand out to community. Bottled water is available at the UC/AC facility for pickup by community members.

## 8.0 Colorado Department of Public Health and Environment

The CDPHE demobilized field sampling teams on 8/19/2015. CDPHE will return to the normally scheduled watershed sampling in the area. Public water systems will continue sampling according to their regular sample plans established by CDPHE.

## 9.0 Mine Division Response Actions

The EPA continues to operate and work on optimizing four treatment and sedimentation ponds at the mine site that are treating water by lowering acidity levels and removing dissolved metals.

## **10.0 Water Treatment Plant**

Caustic and flocculent addition is ongoing.

Initiated pumping from Gold King Mine treatment pond 1 to Red and Bonita pond 3.

Evaluated Gladstone area for potential water treatment locations.

## **11.0 Water Quality Sampling**

Water quality parameters are collected at 11 locations three times daily.

Flow Rate of 647 GPM was recorded at 0930 from the Gold King Mine adit portal.

Flow rate of 573 GPM was recorded at 1525 from the Gold King Mine adit portal.

Teams observed turbidity above North Fork of Cement Creek not associated with response activities.

## **12.0 Gold King Mine**

Mine stability consultants are on site.

Berm on GKM road was improved.

Began removing loose rock from the slope.

Gabion baskets are ready to be deployed.

## **13.0 Site Visits**

NM Senator Barrasso staff visited GKM site.

Office of Inspector General (OIG) visited site.

Navajo representatives visited Gold King Mine.

## **Anticipated Activities**

### **14.0 Durango Area Anticipated Activities**

The EPA will be sampling the northern fish pond ditch today and awaiting results prior to opening this river diversion ditch. The headwater of the ditch was cleaned out 8/19/2015.

### **15.0 Mine Division Anticipated Activities**

**15.1 Treatment in first pond will be changed from direct treatment to circular treatment to improve circulation.**

**15.2A survey of the Gold King Mine waste dump will be conducted.**

### **16.0 Other activities occurring in the area that are not directly associated with the response:**

16.1 Bureau of Land Management (BLM) is conducting a survey of roads near the mine site.

San Miguel Power will remove damaged power lines on 8/26/2015 and permission was given to remove poles at the Gold King Mine portal.

## **Command and General Staff**

### **17.1 Logistics Section**

The UC ICP will be moved from the current facility at the La Plata County Fairgrounds, during the next operational period of 8/23 to 8/26/2015 on Sunday evening 8/23/2015. The new location is 135 Burnett Dr., Durango, CO. All Sections and Units need to plan to move their entire operation at the close of business on Sunday, 8/23/2015.

### **17.2 Finance Section**

The EPA Region 8 total cost as of the end of 8/20/2015 is \$1,539,527. The current burn rate (\$/day) is \$1,649,740.

### **17.3 Safety Officer**

Additional PPE and other safety equipment for the mine operations were obtained at end of day Thursday 8/20/2015. Due to current western fires, the Area Safety Officer would like to emphasize fire safety and awareness. Please refrain from smoking in grassy or brush areas and be sure all cigarette butts are extinguished properly. If possible do not drive any motorized vehicle in tall, dry grassy areas. Due to wind shifts please be aware of light to moderate particulate and pay special attention those with sensitivities or respiratory conditions.

You can contact your CISM team members at any time (24/7):

Wendy Adams (R-10): 425 466-6532

Tony Honnellio (R-1): 617 947-4414

### **17.4 Liaison Officer**

No report.

### **17.5 Information Officer**

A public meeting was held at Miller Middle School on Thursday, 8/20/2015.

Social Media Sites being maintained by the UC JIC:

Blog – [goldkingminerelease.blogspot.com](http://goldkingminerelease.blogspot.com)

FB – [facebook.com/goldkingminerelease](https://facebook.com/goldkingminerelease)

Twitter - @GKMRelease, @SilvertonCO1, @VisitSilverton

YouTube Channel – Gold King Mine Release

As of 0730 on 8-21-2015, the blog had 1504 page views (202 yesterday), 0 comments; Facebook has 42 likes, 22 shares, 0 comments, total views 298; and there have been 29 tweets and 25 followers.

## 18.0 Weather Forecast

Weather forecast for August 21 and 22, 2015:

### DURANGO AREA

#### Today

Isolated showers and thunderstorms after noon. Widespread haze. Mostly sunny, with a high near 88. Light and variable wind becoming west 10 to 15 mph in the afternoon. Chance of precipitation is 20%.

#### Tonight

A 10 percent chance of showers and thunderstorms, mainly between 11pm and 1am. Partly cloudy, with a low around 52. West wind 5 to 10 mph becoming east after midnight. Winds could gust as high as 20 mph.

#### Saturday

A 10 percent chance of showers and thunderstorms after noon. Mostly sunny, with a high near 84. East wind 5 to 10 mph becoming west in the afternoon. Winds could gust as high as 20 mph.

#### Saturday Night

Partly cloudy, with a low around 53. Northwest wind 5 to 10 mph becoming light and variable after midnight.

### SILVERTON AREA

#### Today

Scattered showers and thunderstorms, mainly after 3pm. Widespread haze. Partly sunny, with a high near 71. South wind 5 to 10 mph becoming west 10 to 15 mph in the morning. Winds could gust as high as 25 mph. Chance of precipitation is 30%.

#### Tonight

A slight chance of showers and thunderstorms before 2am, then a slight chance of showers and thunderstorms after 5am. Partly cloudy, with a low around 40. Southwest wind 5 to 15 mph. Chance of precipitation is 10%.

#### Saturday

A 30 percent chance of showers and thunderstorms, mainly between noon and 3pm. Mostly sunny, with a high near 70. West wind 5 to 15 mph.

#### Saturday Night

A 10 percent chance of showers and thunderstorms before midnight. Partly cloudy, with a low around 40. West wind around 5 mph becoming east after midnight.

## 19.0 Participating Entities

### 19.1 EPA Area Command

The AC includes EPA Regions 6, 8 and 9. The EPA Region 8 includes Colorado. The EPA Region 6 is working closely with the New Mexico Environment Department (NMED) and the EPA Region 9 is working with the Navajo Nation. The AC is completing daily Executive Summary updates on AC operational activities.



## 19.2 Unified Command and Cooperating Agencies

A Unified Command (UC) located in Durango, Colorado was established and continues to assess and mitigate contamination resulting from the release. The UC includes EPA Region 8, State of Colorado Office of Emergency Management (OEM), Southern Ute Indian Tribe, and La Plata County. San Juan Basin Health Department is an Agency Administrator to the UC. Currently San Juan County and the Ute Mountain Ute Tribe are providing Administrators to the UC. The City of Durango and the Colorado Department of Public Health and the Environment (CDPHE) are providing Agency Representatives to the UC.

The Southern Ute Indian Tribe has discontinued Animas River water sampling. As a proactive measure, the SUIT is continuing installing reverse osmosis on tribal residential kitchen taps. If individual drinking well sampling results show any concerns, additional actions will be taken.

US Bureau of Reclamation (USBR) Technical Service Center is providing technical assistance for the EPA road stabilization efforts in and around the mine site.

### Total Personnel On Incident

Gold King Mine Release 2015	
	08/19/2015
Group	Number
EPA @ REOC	(12 on call)
Contractors @ REOC	2
EPA in Field	10
EPA Contractors in Field	30
EPA Laboratory	0
Contractors Laboratory	1
USCG	7
ERT	1
Subtotal EPA Region 8 Resources	51 (+12 on call)
Position / Section	Number of Personnel
Unified Command	4
PIO	13
Safety	1
Operations	3
Planning (incl SITL, ENVL & RESL)	5
Logistics	1
Finance	2
Liaisons	0
Agency Representatives/Administrators	1
Total	30

Personnel working at the Colorado Unified Command Post on 08/20/15  
(Does not include Area Command Personnel):

Organizations with individuals deployed to the response under the UC include:

Colorado OEM

Southern Ute Tribe

La Plata County

San Juan County

Colorado Department of Public Health and Environment

State of Colorado resources: Southwest IMT, Northwest IMT, Boulder IMT, Jeffco IMT

City of Durango

San Juan Basin Health Dept.

US Bureau of Reclamation

US Bureau of Indian Affairs

## **20.0 Definition of Acronyms**

No new terms for this SITREP. Please see previous SITREPS for explanation of Acronyms.